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TOWNSEND and TOWNSEND and CREW LLP

By:

Mark T. Davis

1652
PATENT
Attorney Docket No.: 019957-016830US
Client Reference No.: NEO00255



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

A. Sami SARIBAS, et al.

Application No.: 10/587,769

Filed: February 4, 2005

For: METHODS OF REFOLDING
MAMMALIAN
GLYCOSYLTRANSFERASES

Examiner: Not Yet Assigned

Art Unit: 1652

INFORMATION DISCLOSURE
STATEMENT UNDER 37 CFR §1.97 and
§1.98

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

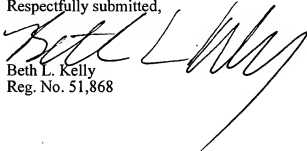
The references cited on attached form PTO/SB/08A are being called to the attention of the Examiner. Copies of the references [in compliance with the requirements of 37 CFR §1.98(a)(2)] are enclosed. It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

Also enclosed is a copy of the Search/Examination report corresponding to the PCT application.

As provided for by 37 CFR §1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicant believes that no fee is required for submission of this statement. However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,


Beth L. Kelly
Reg. No. 51,868

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61011409 v1

Substitute for form 1449A&B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 4

Complete if Known

Application Number	10/587,769
Filing Date	February 4, 2005
First Named Inventor	Saribas, Sami
Art Unit	1652
Examiner Name	Not Yet Assigned
Attorney Docket Number	019957-016830US

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA	US-6,037,730	05-03-2002	Bayer et al.	

NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
/MM/	AB	BACH, Horacio et al.; "Escherichia coli Maltose-binding Protein as a Molecular Chaperone for Recombinant Intracellular Cytoplasmic Single-chain Antibodies"; 2001, <u>J. Mol. Bio.</u> , Vol. 312, pp. 79-93.	<input type="checkbox"/>
	AC	BENNETT, Eric Paul et al.; "cDNA Cloning and Expression of a Novel Human UDP-N-acetyl- α -D-galactosamine"; 1996, <u>The Journal of Biological Chemistry</u> , Vol. 271, No. 29, pp. 17006-17012.	<input type="checkbox"/>
	AD	BENNETT, Eric Paul et al.; "Genomic organization and chromosomal localization of three members of the UDP-N-Acetylglucosaminyltransferase: polypeptide N-Acetylglucosaminyltransferase family"; 1998, <u>Glycobiology</u> , Vol. 8, No. 6, pp. 547-555.	<input type="checkbox"/>
	AE	BOEGGEMAN, Elizabeth E. et al.; "Expression of deletion constructs of bovine β -1,4-galactosyltransferase in Escherichia coli: importance of Cys134 for its activity"; 1993, <u>Protein Engineering</u> , Vol. 6, No. 7, pp. 779-785.	<input type="checkbox"/>
	AF	CHEN, Wei et al.; "Independent Lec1A CHO Glycosylation Mutants Arise from Point Mutations in N-Acetylglucosaminyltransferase I That Reduce Affinity for Both Substrates. Molecular Consequences Based on the Crystal Structure of GlcNAc-TI"; 2001, <u>Biochemistry</u> , Vol. 40, pp. 8765-8772.	<input type="checkbox"/>
	AG	CHEN, Wei et al.; "Five Lec1 CHO cell mutants have distinct <i>Mgat1</i> gene mutations that encode truncated N-acetylglucosaminyltransferase I"; 2003, <u>Glycobiology</u> , Vol. 13, No. 1, pp. 43-50.	<input type="checkbox"/>
	AH	CLARK, Eliana De Bernardez; "Protein refolding for industrial processes"; 2001, <u>Current Opinion in Biotechnology</u> , Vol. 12, pp. 202-207.	<input type="checkbox"/>
	AI	COFFMAN, Birgit L. et al.; "Analysis of Opioid Binding to UDP-Glucuronosyltransferase 2B7 Fusion Proteins Using Nuclear Magnetic Resonance Spectroscopy"; 2001, <u>Molecular Pharmacology</u> , Vol. 59, No. 6, pp. 1464-1469.	<input type="checkbox"/>
	AJ	COLLAND, Frederic et al.; Functional Proteomics Mapping of a Human Signaling Pathway"; 2004, <u>Genome Research</u> , Vol. 14, pp. 1324-1332.	<input type="checkbox"/>
	AK	COLLINS, Francis S.; "Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences"; 2002, <u>PNAS</u> , Vol. 99, No. 26, pp. 16899-16903.	<input type="checkbox"/>
Examiner Signature	/Mohammad Meah/ (08/20/2008)		Date Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449A&B/PTO				Complete if Known Application Number 10/587,769 Filing Date February 4, 2005 First Named Inventor Sariabas, Sami Art Unit 1652 Examiner Name Not Yet Assigned Attorney Docket Number 019957-016830US	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use as many sheets as necessary)					
Sheet	2	of	4		

NON PATENT LITERATURE DOCUMENTS					
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²		
/MM/	AL	D'AGOSTARO, Giacomo et al.; "Cloning of cDNA encoding the membrane-bound form of bovine β 1,4-galactosyltransferase"; 1989, <u>Eur. J. Biochem.</u> , Vol. 183, pp. 211-217.	<input type="checkbox"/>		
	AM	LEE, Young-Choon et al.; "Molecular Cloning and Functional Expression of Two Members of Mouse NeuAco2,3Gal β 1,3GalNAc GalNAco2,6-Sialyltransferase Family, ST6GalNAc III and IV"; 1999, <u>The Journal of Biological Chemistry</u> , Vol. 274, No. 17, pp. 11958-11967.	<input type="checkbox"/>		
	AN	FUJIYAMA, Kazuhito et al.; "Human N-Acetylglucosaminyltransferase I. Expression in <i>Escherichia coli</i> as a Soluble Enzyme, and Application as an Immobilized Enzyme for the Chemoenzymatic Synthesis of N-Linked Oligosaccharides"; 2001, <u>Journal of Bioscience and Bioengineering</u> , Vol. 92, No. 6, pp. 569-574.	<input type="checkbox"/>		
	AO	GILLESPIE, William et al.; "Cloning and Expression of the Gal β 1,3GalNAc α 2,3-Sialyltransferase"; 1992, <u>The Journal of Biological Chemistry</u> , Vol. 267, No. 29, pp. 21004-21010.	<input type="checkbox"/>		
	AP	HELLMAN, Jukka et al.; "In Vitro Refolding of Cyclomaltodextrin Glucanotransferase from Cytoplasmic Inclusion Bodies Formed upon Expression in <i>Escherichia coli</i> "; 1995, <u>Protein Expression and Purification</u> , Vol. 6, pp. 58-62.	<input type="checkbox"/>		
	AQ	JU, Tongzhong et al.; "Cloning and Expression of Human Core 1 β 1,3-Galactosyltransferase"; 2002, <u>The Journal of Biological Chemistry</u> , Vol. 277, No. 1, pp. 178-186.	<input type="checkbox"/>		
	AR	KAPUST, Rachel B. et al.; " <i>Escherichia coli</i> maltose-binding protein is uncommonly effective at promoting the solubility of polypeptides to which it is fused"; 1999, <u>Protein Science</u> , Vol. 8, pp. 1668-1674.	<input type="checkbox"/>		
	AS	KOPRIVOVA, A. et al.; "N-Glycosylation in the Moss <i>Physcomitrella patens</i> is Organized Similarly to that in Higher Plants"; 2003, <u>Plant Biology</u> , Vol. 5, pp. 582-591.	<input type="checkbox"/>		
	AT	KUROSAWA, Nobuyuki et al.; "Molecular Cloning and Genomic Analysis of Mouse GalNAc α 2,6-Sialyltransferase (ST6GalNAc I)"; 2000, <u>J. Biochem.</u> , Vol. 127, pp. 845-854.	<input type="checkbox"/>		
	AU	MUCHA, Jan et al.; "Tissues of the clawed frog <i>Xenopus laevis</i> contain two closely related forms of UDP-GlcNAc: α 3-D-mannoside β -1,2- N-Acetylglucosaminyltransferase I"; 2001, <u>Glycobiology</u> , Vol. 11, No. 9, pp. 769-778.	<input type="checkbox"/>		
/MM/	AV	NISHIU, Jun et al.; "Characterization of Rat N-Acetylglucosaminyltransferase I Expressed in <i>Escherichia coli</i> "; 1995, <u>Biosci. Biotech. Biochem.</u> , Vol. 59, No. 9, pp. 1750-1752.	<input type="checkbox"/>		

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Sheet	3	of	4	Application Number	10/587,769
				Filing Date	February 4, 2005
				First Named Inventor	Saribas, Sami
				Art Unit	1652
				Examiner Name	Not Yet Assigned
				Attorney Docket Number	019957-016830US

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Examiner Initials *	Cite No.†	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
/MM/	AW	NOZAKI, Hirofumi et al.; "Are there two forms of β 2- N-Acetylglucosaminyltransferase I in rat testicular and epididymal fluids"; 2003, <u>Biochimica et Biophysica Acta</u> , Vol. 1649, pp. 140-145.	<input type="checkbox"/>
	AX	OPAT, Andrew S. et al.; "Genetic defect in N-Acetylglucosaminyltransferase I gene of a ricin-resistant baby hamster kidney mutant"; 1998, <u>Biochem. J.</u> , Vol. 336, pp. 593-598.	<input type="checkbox"/>
	AY	PUTHALAKATHI, Hamsa et al.; "Glycosylation Defect in Lec1 Chinese Hamster Ovary Mutant Is Due to a Point Mutation in N-Acetylglucosaminyltransferase I Gene"; 1996, <u>The Journal of Biological Chemistry</u> , Vol. 271, No. 44, pp. 27818-27822.	<input type="checkbox"/>
	AZ	QUESNEVILLE, Hadi et al.; "Combined Evidence Annotation of Transposable Elements in Genome Sequences"; 2005, <u>PLoS Computational Biology</u> , Vol. 1, No. 2, pp. 166-175.	<input type="checkbox"/>
	BA	RAMAKRISHNAN, Boopathy et al.; "Structure-based Design of β 1,4-Galactosyltransferase I (p4Gal-T1) with Equally Efficient N-Acetylglucosaminyltransferase Activity"; 2002, <u>The Journal of Biological Chemistry</u> , Vol. 277, No. 23, pp. 20833-20839.	<input type="checkbox"/>
	BB	SARKAR, M. et al.; "Removal of 106 amino acids from the N-terminus of UDP-GlcNAc: α -3-D-mannoside β -1,2-N-Acetylglucosaminyltransferase I does not inactivate the enzyme"; 1998, <u>Glycoconjugate Journal</u> , Vol. 15, pp. 193-197.	<input type="checkbox"/>
	BC	SARKAR, M. et al.; "Molecular cloning and expression of cDNA encoding the enzyme that controls conversion of high-mannose to hybrid and complex N-glycans: UDP N-Acetylglucosaminyltransferase: α -3-D-mannoside β -1,2 N-Acetylglucosaminyltransferase I"; 1991, <u>PNAS</u> , Vol. 88, pp. 234-238.	<input type="checkbox"/>
	BD	SASAKI, Katsutoshi et al.; "Expression Cloning of a Novel Gal β (1-3/1-4)GlcNAc α 2,3-Sialyltransferase Using Lectin Resistance Selection"; 1993, <u>The Journal of Biological Chemistry</u> , Vol. 268, No. 30, pp. 22782-22787.	<input type="checkbox"/>
	BE	TENNO, Mari et al.; "Identification of two cysteine residues involved in the binding of UDP-GalNAc to UDP-GalNAc:polypeptide N-Acetylglucosaminyltransferase I (GalNAc-T1)"; 2002, <u>Eur. J. Biochem.</u> , Vol. 269, pp. 4308-4316.	<input type="checkbox"/>
	BF	UNLIGIL, Ulig M. et al.; "X-ray crystal structure of rabbit N-Acetylglucosaminyltransferase I: catalytic mechanism and a new protein superfamily"; 2000, <u>The EMBO Journal</u> , Vol. 19, No. 20, pp. 5269-5280.	<input type="checkbox"/>
/MM/	BG	UEHARA, Kazuyoshi et al.; "Molecular cloning and characterization of β -1,4 galactosyltransferase expressed in mouse testis"; 1997, <u>Eur. J. Biochem.</u> , Vol. 244, pp. 706-712.	<input type="checkbox"/>

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Sheet	4	of	4		

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/MM/	BH	YANG, Xiaojing et al.; "Soluble human core 2 β -N-Acetylglucosaminyltransferase C2GnT1 requires its conserved cysteine residues for full activity"; 2003, <u>Biochimica et Biophysica Acta</u> , Vol. 1648, pp. 62-74.	<input type="checkbox"/>	
	BI	WEN, Dawn X. et al.; "Primary Structure of Gal β 1,3(4)GlcNAc α 2,3-Sialyltransferase Determined by Mass Spectrometry Sequence Analysis and Molecular Cloning"; 1992, <u>The Journal of Biological Chemistry</u> , Vol. 267, No. 29, pp. 21011-21019.	<input type="checkbox"/>	
	BJ	WHITE, Thayer et al.; "Purification and cDNA Cloning of a Human UDP-N-acetyl- α -D-galactosamine:polypeptide N-Acetylglucosaminyltransferase"; 1995, <u>The Journal of Biological Chemistry</u> , Vol. 270, No. 41, pp. 24156-24165.	<input type="checkbox"/>	
	BK	WONG, Chi-Huey; "Carbohydrate-based Drug Discovery"; 2003, <u>The Scripps Research Institute</u> , pp. 129-136.	<input type="checkbox"/>	
	BL	"FoldIt Screen: User Guide"; 2000, <u>Hampton Research</u> , 6 pages.	<input type="checkbox"/>	
	BM	NCBI accession XM 315359.3, 2 pages.	<input type="checkbox"/>	
	BN	NCBI accession NM 065318.2, 2 pages.	<input type="checkbox"/>	
	BO	NCBI accession AJ249878.1, 2 pages.	<input type="checkbox"/>	
	BP	NCBI accession AJ249883.1, 2 pages.	<input type="checkbox"/>	
	BQ	NCBI accession AJ295993.1, 2 pages.	<input type="checkbox"/>	
/MM/	BR	NCBI accession NM 119986.3, 2 pages.	<input type="checkbox"/>	

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